

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

① 1. (Previously Presented) A high purity Nb sputtering target consisting essentially of Nb containing an amount of Ta impurity dispersed therein, the amount of Ta in the target being 3000 ppm or less, wherein a dispersion of the Ta content in the target is within 30%, the dispersion of the Ta content being defined by the following equation, for measured content values in the target:

dispersion (%) = {(maximum value - minimum value) / (maximum value + minimum value)} X 100.

2. (Canceled)

3. (Original) The sputtering target as set forth in claim 1:

wherein the Ta content is 1000ppm or less.

4. (Original) The sputtering target as set forth in claim 1:

wherein oxygen content in the target is 200ppm or less.

5. (Original) The sputtering target as set forth in claim 1:

wherein an average grain diameter of the Nb is 100μm or less.

6. (Previously Presented) The sputtering target as set forth in claim 1:

wherein each grain of Nb has a grain diameter in the range of 0.1 to 10 times an average grain diameter, and a grain size ratio of adjacent grains is in the range of 0.1 to 10.

7. (Original) The sputtering target as set forth in claim 1:

wherein the sputtering target is bonded with a backing plate.

8. (Original) The sputtering target as set forth in claim 7:

wherein the sputtering target and the backing plate are diffusion bonded.

9. (Previously Presented) The sputtering target as set forth in claim 1:

wherein the sputtering target is applied to form a Nb film for a liner of an Al interconnection film or an Al alloy interconnection film.

10. (Previously Presented) A sputtering target consisting essentially of high purity Nb:

wherein the target has Nb grains having an average grain diameter of 100 μ m or less, and wherein each grain constituting the Nb target has a grain diameter in the range of 0.1 to 10 times the average grain diameter, and a grain size ratio of adjacent grains is in the range of 0.1 to 10.

11. (Previously Presented) The sputtering target as set forth in claim 10:

wherein a dispersion of the grain size ratio of adjacent grains in the target is within 30%,

wherein the dispersion of the grain size ratio of the adjacent grains is defined by the following equation, for measured values in the target:

dispersion (%) = {(maximum value - minimum value) / (maximum value + minimum value)} X 100.

12. (Previously Presented) The sputtering target as set forth in claim 10:

wherein the grain size ratio of the adjacent grains is in the range of 0.5 to 5.

13. (Canceled)

14. (Original) The sputtering target as set forth in claim 10:

wherein oxygen content in the target is 200ppm or less.

D, 15. (Original) The sputtering target as set forth in claim 10:

wherein the sputtering target is bonded with a backing plate.

16. (Original) The sputtering target as set forth in claim 15:

wherein the sputtering target and the backing plate are diffusion bonded.

17. (Previously Presented) The sputtering target as set forth in claim 11:

wherein the sputtering target is used to form a Nb film for a liner of an Al interconnection film or an Al alloy interconnection film.

18. (Previously Presented) A high purity Nb sputtering target consisting essentially of Nb containing an amount of oxygen as an impurity dispersed therein, the oxygen content in the target being 200 ppm or less, wherein a dispersion of the oxygen content in the target is within 80%, the dispersion of the oxygen content being defined by the following equation, for measured values in the target:

$$\text{dispersion (\%)} = \{(\text{maximum value} - \text{minimum value}) / (\text{maximum value} + \text{minimum value})\} \times 100.$$

19. (Cancelled)

20. (Original) The sputtering target as set forth in claim 18:

wherein the oxygen content is 100ppm or less.

21. (Original) The sputtering target as set forth in claim 18:

wherein the sputtering target is bonded with a backing plate.

22. (Original) The sputtering target as set forth in claim 21:

wherein the sputtering target and the backing plate are diffusion bonded.

23. (Previously Presented) The sputtering target as set forth in claim 18:

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wherein the sputtering target is used to form a Nb film for a liner of an Al interconnection film or an Al alloy interconnection film.

24. (Previously Presented) A high purity Nb sputtering target consisting essentially of Nb for forming a Nb liner film of an Al interconnection film in applying dual damascene interconnection technology, wherein the target contains an amount of Ta impurity dispersed therein, the amount of Ta in the target being 3000 ppm or less, and a dispersion of the Ta content in the target being within 30%, wherein the dispersion of the Ta content is defined by the following equation, for measured content values in the target:

$$\text{dispersion (\%)} = \{(\text{maximum value} - \text{minimum value}) / (\text{maximum value} + \text{minimum value})\} \times 100.$$

25. (Previously Presented) A high purity Nb sputtering target consisting essentially of Nb for forming a Nb liner film of an Al interconnection film in applying dual damascene interconnection technology, wherein the target contains an amount of oxygen as an impurity, the amount of oxygen in the target being 200 ppm or less, and a dispersion of the oxygen content in the target being within 80%, wherein the dispersion of the oxygen content is defined by the following equation, for measured content values in the target:

$$\text{dispersion (\%)} = \{(\text{maximum value} - \text{minimum value}) / (\text{maximum value} + \text{minimum value})\} \times 100.$$

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